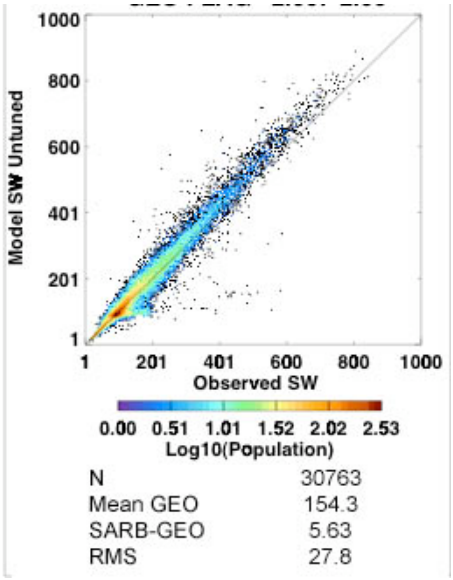
Comparison of GEO BB fluxes with SARB

- Purpose
  - To check the consistency between the fluxes and the given cloud property and atmospheric inputs
  - SARB un-tuned flux estimates are from FU-Liou radiative transfer calculations based on input cloud property and GEOS profiles
- Method
  - Compute SYN for July 2002 for one latitude band
  - Compare with CERES fluxes and MODIS cloud properties as a baseline
  - Compare with GEO derived broadband fluxes and GEO cloud properties
    - Errors due to both NB to BB and cloud property errors
- Preliminary - first attempt results

Fig. 9b: Comparison of GEO SW BB and CERES fluxes with SARB

GEO



CERES

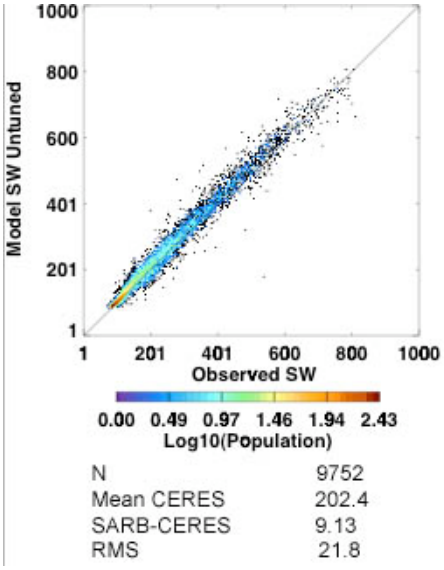
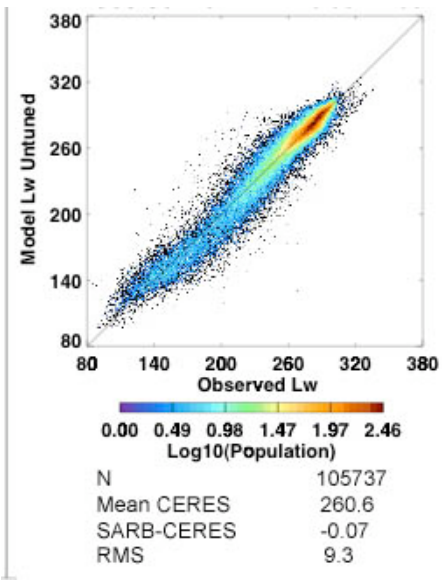


Fig. 9c: Comparison of GEO LW BB and CERES fluxes with SARB

GEO-daytime



CERES

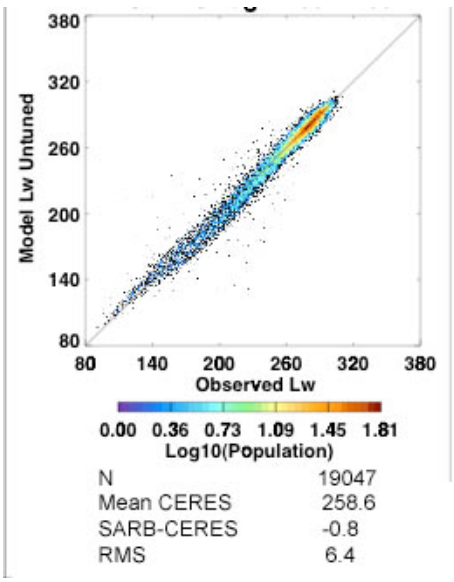


Fig. 9d: Comparison of GEO BB fluxes with SARB

- Preliminary results show promise
- Need to further study the large SW flux scenes and LW GEO cloud emissivities
    - Evaluate GEO fluxes with MODIS clouds
    - Evaluate CERES fluxes with GEO clouds
- TISA will work with SARB to deliver SYN and AVG products in the near future

(%)	SW		LW	
	CERES	GEO	CERES	GEO
Bias	4.5	3.6	0.3	<0.1
RMS	10.8	18.0	2.5	3.6